

Kansas Environmental News



Spring 2004



Secretary's Corner

Every spring we are reminded of the importance of protecting our environment as Earth Day is celebrated. Many exciting things are going on in Kansas which highlight efforts by individuals, businesses, communities and government to promote and protect this beautiful state.

Our 2004 WORKS! Conference held in Lindsborg March 23-25 celebrated the achievements of solid waste improvements over the past several decades in Kansas. The conference was a success with about 300 attendees from across the state including nine delegates from Romania and Ghana. This was the 10th annual such conference, which focused on recycling and composting efforts in Kansas, and was hosted by KDHE's Bureau of Waste Management.

To promote new environmentally friendly projects in our state, KDHE offers several grants which significantly benefit the environment through new or unique recycling, composting and waste reduction methods. The Solid Waste Management Competitive Plan Implementation Grant Program supports projects which reduce solid waste, provide recycling opportunities and public education. The Waste Tire Grant Program provides assistance for waste tire marketing, tire recycling, or tire reuse projects.

In addition, major clean up efforts are ongoing around the state, made possible through our Illegal Dump Program. The program has helped cities and counties clean up approximately 100 sites since 2000. This effort not only restores the beautiful landscape of our state, but by removing the waste, it protects the environment from additional contamination.

This year KDHE is debuting an educational mobile trailer that will be used to take environmental education materials to various locations throughout the state. Look for it at school events, the state fair,

conferences and work shops. Through these efforts, KDHE can reach both children and adults with ideas about how to protect our environment every day.

It's contest time again. A popular annual environmental educational activity for Kansas children is the 'Kansas Don't Spoil It' Calendar Contest. It's the fifth year for the calendar which highlights the best student artwork (K-12) that promotes the protection of the environment. Winners will be selected in the next few weeks and they are eligible for prizes and will have their photo taken with Governor Sebelius. The 2005 calendars will be available to the public next fall.

While many KDHE efforts are in place to assist with protecting our environment, it takes all of us to preserve this beautiful state. We can all help make Kansas a better place to live!

Be Well,

Rod

Table of Contents

Secretary's Corner.....	1
Air Pollution and Kansas Weather.....	2
Regulations in Process.....	3
2004 Kansas Environment Conference.....	3
New Solid Waste Film.....	4
EMS Implementation for Small Businesses.....	4
Summary of Class V Issues.....	5
Waste Management Outreach Program.....	5-6
Kansas National Guard Honored.....	6-7
KDHE Removes Anhydrous Tank.....	7

Air Pollution and Kansas Weather

Because of the state's geographical location in the middle of the country, Kansans experience four distinct seasons. Cold winters and hot, dry summers are the norms for the state. The other constant in Kansas weather is the wind. Kansas ranks high in the nation in average daily wind speed. In 2003, the average wind speed across the state was slightly more than 11 m.p.h. The predominant wind direction was from the south. These factors combine to affect the two major areas of air quality concern in the state, ozone and particulate matter.

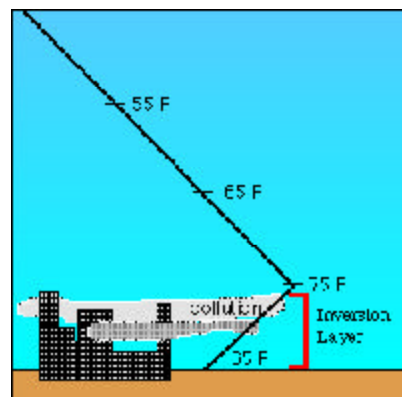
The air pollution meteorology problem is a two-way street. The presence of pollution in the atmosphere may affect the weather and climate. At the same time, the meteorological conditions greatly affect the concentration of pollutants at a particular location, as well as the rate in which they are distributed throughout the atmosphere.

The ground level ozone or smog problem develops in Kansas during April through October. Ozone is formed easily in the atmosphere by the reaction of volatile organic compounds (VOC) and oxides of nitrogen (NO_x) in the presence of heat and sunlight, which are most abundant in the summer months. Kansas tends to see ozone episodes in the summer when high pressure systems stall over the area which leads to cloudless skies, high temperatures and light winds. Another element of these high pressure systems that contribute to pollution problems is the development of upper air inversions. This will typically "cap" the atmosphere above the surface and not allow the air to mix and distribute pollutants. Therefore, pollution concentrations may continue to increase near the ground from numerous pollution sources because the air is not mixing within and above the inversion layer.

The other pollutant of concern is particulate matter (PM). Kansas has a long history of particulate matter problems caused by our weather. The Great Dust Bowl of the 1930's was caused, in part, by many months of minimal rainfall and high winds. This natural source of PM pollution, although not as bad as in the 1930's, is still a concern today as varying annual weather conditions across the state cause soil to be carried into the air and create health problems for Kansans.

Another source of PM pollution is generated by processes that have been initiated by humans. These particles may be emitted directly by a source or formed in the atmosphere by the changing of gaseous elements.

Meteorological conditions also affect how these man-made sources of PM form and disperse. One factor that is common in Kansas that can lead to high pollution episodes is a surface inversion. Like upper air inversions, warmer air just above the surface of the earth forms a surface inversion and caps all pollutants below it. These inversions are mainly caused by the faster loss of heat from the surface than the air directly above it. In Kansas, surface inversions are more common in the winter months, but can occur during any season and lead to pollution problems. The figure on the right shows a simplified version of how a surface inversion would appear in a temperature profile of the atmosphere. The figure shows how the warm air aloft can trap the pollution at the surface.



These meteorological factors continue to make air pollution episodes a reality in Kansas and drives home the importance that weather plays in the lives of all Kansans.

Doug Watson, Bureau of Air and Radiation

KDHE REGULATIONS IN PROCESS

REGULATION	DIV. DRAFT	EPA REVIEW	DOA REVIEW	AG REVIEW	update 04/08/04 PUBLIC HEARING	EFFECTIVE
<u>Waste Management</u>						
SWPlanning(A)	6/03	N/A	9/03	10/03	1/04	*3/04
Tires (A)	10/03		*3/04	*6/04	*8/04	*10/04
Haz. Waste Monitoring Fee	*3/04		*4/04	*5/04	*7/04	*9/04
Hazardous Waste Update (A)	*6/04	*7/04	*7/04	*10/04	*12/04	*2/05
<u>Air and Radiation</u>						
AcidRainPermits(A)	3/04		2/04	4/04	6/04	7/04
Acid Rain NOx(N)	3/04		2/04	4/04	6/04	7/04
UpdateStds(NSPS,MA)	3/04		2/04	4/04	6/04	7/04
Consolidated Air Rule (N)	3/04		9/04	12/04	7/05	9/05
Definitions (A)	*6/04		4/04	9/04	6/05	7/05
Inventory Report Regs	*5/04		*10/03	1/04	5/04	7/04
Transportation Conformity (A)	*5/04		*6/04	*7/04	*9/04	*10/04
<u>Water</u>						
Surface WQS	*4/04	*12/04	*5/04	*6/04	*8/04	*10/04
Surface WQS (UAAs)	9/03	*1/04	9/03	9/03	12/1-2/03	1/04
<u>Public Water Supply</u>						
Lead Copper Minor Revisions(N)	3/03	3/03	3/04	*4/04	*7/04	*9/04
Consumer Confidence Report(N)	3/03	3/03	3/04	*4/04	*7/04	*9/04
Public Notification(N)	3/03	3/03	3/04	*4/04	*7/04	*9/04
IESWTR(N)	3/03	3/03	3/04	*4/04	*7/04	*9/04
Stage 1 DDBP(N)	3/03	3/03	3/04	*4/04	*7/04	*9/04
LT1(N)	3/03	3/03	3/04	*4/04	*7/04	*9/04
Filter Backwash Recycling Rule(N)	3/03	3/03	3/04	*4/04	*7/04	*9/04
Radionuclide Rule(N)	3/03	3/03	3/04	*4/04	*7/04	*9/04
Arsenic Rule(N)	3/03	3/03	3/04	*4/04	*7/04	*9/04
Permits		3/03	3/04	*4/04	*7/04	*9/04
28-15-11,13,14,15a,20,21,22(R)	3/03	3/03	3/04	*4/04	*7/04	*9/04
<u>Geology</u>						
Water Well (GMD #2)	2/04	N/A	*5/04	*6/04	*7/04	*9/04
<u>Livestock Waste Management</u>						
Groundwater	12/03	N/A	*5/04	*8/04	*11/04	*1/05
<u>Environmental Remediation</u>						
Surface Mining	9/03	N/A	*6/04	*7/04	*9/04	*10/04

New(N), Amended(A), Revoked(R)

* denotes projected date

2004 Kansas Environment Conference

Make plans now to attend the 2004 Kansas Environment Conference to be held August 31 - September 2, 2004 at the Doubletree Hotel in Overland Park, Kansas. We are adding something new to the conference this year!! On August 31, a Basic Environmental Regulatory Training session will be offered in the evening at no additional charge to conference participants. This is your chance to learn the basics about environmental regulations, including hazardous waste, water, wastewater, air, storage tanks and more! The agenda for the conference is currently being developed and will be posted on the conference web site: http://www.kdhe.state.ks.us/sbs/environment_conf.html, late spring/early summer. We hope to see you there!!

New Solid Waste Film Features “Ten Years of Progress”

A new KDHE-sponsored film documenting “Ten Years of Progress in Solid Waste Management” was released at the 2004 Works! Conference in Lindsborg on March 24. The premier showing of the film was at the evening Awards Banquet which also honored the first inductees to the new Kansas “Solid Waste Hall of Fame.”

The Bureau of Waste Management developed the idea for this film and coordinated its release with the 10th anniversary of the Works! conference. The bureau served as the technical consultant for film and hired a contractor, Nye and Associates of Wichita, to produce the video.

The major goal of the film is to show the people of Kansas that dramatic improvements have been made in the way Kansans manage their waste. Better landfills have been constructed, groundwater problems have been addressed, illegal dumps have been cleaned up, and more waste is being recycled and composted. The film also shows that these improvements have occurred because of the hard work and dedication of many people working for local governments, private companies, and non-profit organizations.

The public TV stations in Kansas have reported an interest in airing the film and KTWU is working with KDHE to produce an accompanying half hour show where continuing solid waste challenges are discussed by a panel of experts. Other uses for the film include local presentations to civic groups by local government officials and student education in our schools.

Copies of the film will be conditionally released upon request. To receive a copy, a person must agree to show the film to others to help them understand more about solid waste management in Kansas. If you would like a copy, please contact the bureau at (785) 296-1600 or check out our website: www.kdhe.state.ks.us/waste.

Bill Bider, Director, Bureau of Waste Management

Facilitated EMS Implementation for Small Businesses

Environmental Management System (EMS) training is being offered to small businesses in EPA Region VII to facilitate development of an EMS. The classes will provide step-by-step EMS implementation training. The 10-module EMS training seminar will be grouped into four quarterly training sessions offered at the Discovery Center in Kansas City, Mo. The modular components streamline the effort and expense for small and medium-sized businesses.

Facilitated development of an EMS includes classroom instruction, exercises and application of the EMS components through homework. This methodology has proven to be valuable for the clients as it walks them through the development and implementation of the EMS. EPA, state, and RAB (Registrar Accreditation Board) certified auditors will be available to review work and provide guidance as each business develops its unique system.

The quarterly training sessions will be held June 15 - 16, 2004, mid-September 2004, early December 2004, and mid-March 2005. Participation in all four sessions is necessary to complete the EMS. The modules are supported by technical assistance throughout the process; a service which could easily cost a business several thousand dollars is offered for only \$200 (includes all four sessions). The brochure for the training can be viewed online at <http://www.iwrc.org/programs/emsEPAbrochure.pdf>. For more information on the training, please contact the Missouri Department of Natural Resources at 800-361-4827 or daniela.heppard@dnr.mo.gov. The training is sponsored by EPA Region VII, Kansas Department of Health and Environment, Kansas Small Business Environmental Assistance Program, Missouri Department of Natural Resources, Bridging the Gap, Iowa Waste Reduction Center, and the Kansas City Discovery Center.

Cathy Colglazier, KDHE Public Advocate

Summary of Class V Issues

The Underground Injection Control (UIC) program has recently experienced an increase in work associated with Class V UIC wells. Class V wells are typically shallow wells used to place a variety of fluids below the land surface. A common type of Class V well is a large capacity (potential to serve 20 or more people per day) septic tank/leach-field system or any leach-field system that might be receiving industrial wastewater. Class V wells receiving industrial wastewater are considered “endangering” to public health and the environment due to their potential to cause soil and groundwater contamination.

The UIC program recently received several complaints and referrals about septic tank/leach-field systems that were receiving motor vehicle wastes. One complaint involved an auto body shop that had paint overspray discharging to floor drains. Another was a farm implement dealer that was directing vehicle wash water to a leach-field/drywell via a floor drain (see photo).

In the case of the auto body shop, the facility was able to connect to the city sewer system and properly close and abandon the septic tank/leach-field system. Sampling was required to check for contamination of the soil or groundwater prior to closing the system. Sampling was also required at the farm implement dealer. The implement dealer now directs all vehicle wash water to an above ground tank for approved off-site disposal. As a result of these complaints/referrals, KDHE has undertaken additional efforts to determine if other Class V wells are present near these sites. The EPA, is stressing the importance of locating large capacity cesspools and motor vehicle waste disposal wells which are prohibited types of Class V wells. The EPA encourages all states to conduct surveys to locate these and other types of Class V wells. KDHE recently conducted a pilot project survey to identify all facilities in a county with the potential to have a Class V well. KDHE then sent inventory informational letters to those facilities identified. The responses from the facilities are being evaluated by KDHE.

Kirk Hoeffner, L.G., Bureau of Water



Bureau of Waste Management Outreach Program Hits the Road

After several years of promoting the “Kansas Don’t Spoil It!” program, KDHE, Bureau of Waste Management plans to “put the show on the road.” This spring, bureau staff will be using a dual-axle cargo trailer as a part of a traveling environmental education program. Unlike the walkthrough trailer exhibits maintained by some states, the waste management trailer will transport displays and education modules to classrooms, fairs and conferences. The trailer is decorated with eye catching graphics identifying it with the KDHE, Bureau of Waste Management and “Kansas Don’t Spoil It!” program.

Last year, Bureau of Waste Management staff were surveyed on what materials should be included in the trailer. Suggestions ranged from a groundwater movement model to a three dimensional landfill simulation. Trailer contents will be developed over a period of time and be adjusted based on demand and utilization. Other educational materials will include models and activities on household hazardous waste management, recycled content products, sorting recyclables and home composting. Trailer contents will include materials to cover all age groups.

Initial use of the mobile education trailer will be by bureau staff at schools, fairs, water festivals,

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lawn and garden shows and other public events. The bureau also intends to use the trailer at it's own conferences and training seminars to demonstrate principles of waste management. Early trial runs of the trailer will be used to develop an operating manual including instructions on attaching the trailer to the tow vehicle, securing interior contents for transport, use of the displays and models, list of trailer contents, limits on intended uses and a procedure for reporting missing or defective items.

Eventually, the bureau hopes to offer use of the trailer to local units of government. An agreement for use and waiver of liability will be developed for parties outside KDHE. Once procedures for loaning the trailer to local governments are refined, the trailer may also be made available to solid waste grant supported programs, schools and public organizations such as Resource Conservation & Development organizations.

Full development and utilization of the mobile education trailer is still some months off. For additional information on the trailer project, contact Jim Rudeen, Bureau of Waste Management, (785) 296-1603 or jrudeen@kdhe.state.ks.us

Jim Rudeen, Bureau of Waste Management

Kansas National Guard Honored with Army Environmental Award

Over the past few years, the Kansas Army National Guard has implemented new technologies and initiatives at its 90-plus facilities across the state. These efforts recently helped win the Kansas Guard an FY 2003 Secretary of the Army Environmental Security Award in the category of Environmental Quality -- Non-Industrial Installation. The new technologies implemented include:

- *high volume-low pressure paint guns that reduce air emissions and user fatigue caused by routine painting activities;*
- *a recycling program that collected more than 305,000 pounds of recyclable materials in two years and saved the Army almost \$70,000 in FY01;*

- *a series of small-scale erosion control experiments to determine the most effective and efficient way to minimize erosion of firebreaks and training areas;*
- *a comprehensive spill prevention and response program; and*
- *distance learning training packages on topics including Occupational Safety and Health Administration Hazard Communications and Cultural, Pollution Prevention and Natural Resources Awareness.*

Each year, Army environmental professionals from around the world compete for recognition in the categories of natural resources conservation, cultural resources management, environmental quality, pollution prevention, environmental restoration, and weapons systems acquisition. Winners go on to compete for Secretary of Defense Environmental Awards. The Kansas Guard has also won the National Guard Bureau Environmental Security Award in the category of Environmental Quality and the Eagle Award for being the highest ranked winner out of all of the states that won their Environmental Security Awards.

In addition to these innovative projects, the Kansas Guard is the only military unit to serve on the EPA's Region VII Pollution Prevention Roundtable, which serves as a forum to improve the effectiveness of and cooperation among pollution prevention programs in Iowa, Kansas, Missouri and Nebraska. The Kansas Guard has supported providing statewide assistance for the development of new technologies that facilitate environmental research and education, waste management, and environmental compliance assessment and management. Cost savings from many of these initiatives have allowed commanders to allocate more funding for equipment and training, which increases readiness for crisis or emergency responses, thus better balancing environmental and military missions.

Approximately 5,500 soldiers serve in the Kansas Army National Guard in more than 90 armories and facilities across the state of Kansas. As an award winner, the unit stands out as a leading example of the investment the Army makes in

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environmental stewardship on the 16.7 million acres of land it manages while it trains and prepares America's soldiers to fight the global war on terrorism. The readiness of our soldiers depends upon the Army's ability to use its training and testing grounds to the fullest.

Cathy Colglazier, KDHE Public Advocate

KDHE Removes Buried Anhydrous Ammonia Tank

The KDHE Clandestine Laboratory Cleanup Program has the responsibility of cleaning up methamphetamine (meth) laboratories (labs) across the State. Meth labs have the potential to contaminate drinking water supplies, soils, homes, and are highly explosive. The health effects of meth labs include respiratory illness, skin and eye irritation, headaches, nausea and dizziness.

One of the ingredients for making meth is anhydrous ammonia. Anhydrous is commonly used as a fertilizer and is stored in 1,000-gallon nurse tanks that are sold to farmers. Anhydrous ammonia is a common cause of chemical injuries at meth labs as a result of an accidental exposure. Exposure to anhydrous ammonia may produce serious injury to the eyes, skin, and respiratory system. Anhydrous ammonia is caustic and causes severe chemical burns. Victims exposed to anhydrous ammonia require immediate treatment with large quantities of water to minimize the damage.

Program staff has stated that some day, law enforcement is going to find a perpetrator that has stolen and buried a full anhydrous ammonia tank for the purpose of producing meth. One night in September 2003, a sheriff's deputy in Cowley County arrested a man who eventually led the deputy to a remote location where a nurse tank was buried.

The tank was buried in a tree line with only the valves exposed. The response crew donned appropriate personal protective equipment and transferred the anhydrous ammonia to an empty tank loaned from the Winfield Coop. The Winfield Fire Department supplied water and standby fire and rescue services for the response crew.

Approximately 600 gallons of liquid anhydrous ammonia was transferred to the new tank. Later, the crew used excavation equipment to dig up the buried tank. The operation took two days to complete because of the remoteness of the site and the high degree of risk to personnel. The recovered anhydrous ammonia was sent to the Winfield Coop where it will be used for its intended purpose.



The Clandestine Lab Program continues to provide the state of Kansas with the capacity to properly reclaim dangerous chemicals and protect the soil, air and waters of the state. If this tank would have failed and released the 600 gallons of anhydrous ammonia to the soil and groundwater, a large area of groundwater could have been contaminated. KDHE was able to avoid this potential contamination by this quick and effective removal.

Leo Henning, Bureau of Environmental Remediation

Pollution Prevention Awards

Applications must be received by Friday, June 25, 2004. For more information go to http://www.kdhe.state.ks.us/sbcs/p2_pollution_prevention_awards.html or call Cathy Colglazier at 800-357-6087!

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